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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,097	06/27/2001	Jonathan S. Duke-Cohan	00530-089002	1296

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EXAMINER
HADDAD, MAHER M

ART UNIT	PAPER NUMBER
1644	6

DATE MAILED: 07/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/787,097	DUKE-COHAN ET AL.	
	Examiner	Art Unit	
	Maher M. Haddad	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-37* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.
This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

2. In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

I. Claims 1-3, 6, 20-21, and 22-27, drawn to an isolated DNA comprising SEQ ID NO:1 encoding polypeptide of SEQ ID NO:2, vectors, host cells, and methods of producing the polypeptide.

II. Claims 1-3, 6, 20-21, and 22-27, drawn to an isolated DNA comprising SEQ ID NO:11 encoding polypeptide of SEQ ID NO:10, vectors, host cells, and methods of producing the polypeptide.

III. Claims 1-3, 6, 20-21, and 22-27, drawn to an isolated DNA comprising SEQ ID NO:13 encoding polypeptide of SEQ ID NO:12, vectors, host cells, and methods of producing the polypeptide.

IV. Claims 1-3, 6, 20-21, and 22-27, drawn to an isolated DNA comprising SEQ ID NO:19 encoding polypeptide of SEQ ID NO:18, vectors, host cells, and methods of producing the polypeptide.

V. Claims 4-5, drawn to an isolated polypeptide comprising SEQ ID NO:2, and fusion protein.

VI. Claims 4-5, drawn to an isolated polypeptide comprising SEQ ID NO:10 and fusion protein.

VII. Claims 4-5 and 33-36, drawn to an isolated polypeptide comprising SEQ ID NO:12 and fusion protein.

VIII. Claims 4-5 and 33, drawn to an isolated polypeptide comprising SEQ ID NO: 18 and fusion protein.

IX. Claim 7, drawn to a method of enhancing spreading of a macrophage or a monocyte in vitro as it reads on SEQ ID NO: 2.

X. Claim 7, drawn to a method of enhancing spreading of a macrophage or a monocyte in vitro as it reads on SEQ ID NO: 10.

XI. Claim 7, drawn to a method of enhancing spreading of a macrophage or a monocyte in vitro as it reads on SEQ ID NO: 12.

XII. Claim 7, drawn to a method of enhancing spreading of a macrophage or a monocyte in vitro as it reads on SEQ ID NO: 18.

XIII. Claims 8-9, 11-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using SEQ ID NO:2.

XIV. Claims 8-9, 11-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using SEQ ID NO:10.

XV. Claims 8-9, 11-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using SEQ ID NO:12.

XVI. Claims 8-9, 11-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using SEQ ID NO:18.

XVII. Claims 8, 10-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using nucleic acid encoding SEQ ID NO:2.

XVIII. Claims 8, 10-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using nucleic acid encoding SEQ ID NO:10.

XIX. Claims 8, 10-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using nucleic acid encoding SEQ ID NO:12.

XX. Claims 8, 10-14 and 37, drawn to a method of treating a mammal in need of an enhanced immune response using nucleic acid encoding SEQ ID NO:18.

XXI. Claims 15-19, drawn to a method of inhibiting spreading of a macrophage or a monocyte in a mammal using a compound that binds to an attractin polypeptide.

XXII. Claims 28, drawn to a method of identifying a compound that inhibits an immune response as it reads on SEQ ID NO:2.

XXIII. Claims 28, drawn to a method of identifying a compound that inhibits an immune response as it reads on SEQ ID NO:10.

XXIV. Claims 28, drawn to a method of identifying a compound that inhibits an immune response as it reads on SEQ ID NO:12.

XXV. Claims 28, drawn to a method of identifying a compound that inhibits an immune response as it reads on SEQ ID NO:18.

XXVI. Claims 29, drawn to a method of identifying a compound that enhances an immune response as it reads on SEQ ID NO:2.

XXVII. Claims 29, drawn to a method of identifying a compound that enhances an immune response as it reads on SEQ ID NO:10.

XXVIII. Claims 29, drawn to a method of identifying a compound that enhances an immune response as it reads on SEQ ID NO:12.

XXIX. Claims 29, drawn to a method of identifying a compound that enhances an immune response as it reads on SEQ ID NO:18.

XXX. Claims 30-31, drawn to an antibody that binds to a polypeptide selected from the group consisting of SEQ ID NOS: 10, 12 and 18 but that dose not bind to CD26 or to a polypeptide with the SEQ ID NO:2.

XXXI. Claim 32, drawn to a method of treating a mammal in need of an enhanced immune response comprising providing a recombinant cell transfected with a nucleic acid encoding SEQ ID NO:2.

XXXII. Claim 32, drawn to a method of treating a mammal in need of an enhanced immune response comprising providing a recombinant cell transfected with a nucleic acid encoding SEQ ID NO:10.

XXXIII. Claim 32, drawn to a method of treating a mammal in need of an enhanced immune response comprising providing a recombinant cell transfected with a nucleic acid encoding SEQ ID NO:12.

XXXIV. Claim 32, drawn to a method of treating a mammal in need of an enhanced immune response comprising providing a recombinant cell transfected with a nucleic acid encoding SEQ ID NO:18.

3. The inventions listed as Groups I-XXXIV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The invention of Group VIII was found to have no special technical feature that defined the contribution over the prior art of Nagase *et al* (DNA Res. 5:31-39, Feb 1998) (see entire document).

Nagase *et al* teach 1,429 amino acid sequence comprising amino acid residues 1219-1429 of claimed SEQ ID NO: 12 (see sequence alignment and page 34, table I in particular) as in claim 35.

Since Applicant's inventions do not contribute a special technical feature when viewed over the prior art they do not have a single general inventive concept and so lack unity of invention.

4. Irrespective of whichever group applicant may elect, applicant is further required under 35 US 121 (1) to elect a single disclosed species to which claims would be restricted if no generic claim is finally held to be allowable and (2) to list all claims readable thereon including those subsequently added.

A. If Group VII is elected, applicant is required to elect an isolated polypeptide comprising SEQ ID NO:12 and fusion protein wherein a specific functional attractin fragment is: a) amino acid residues 31-104 of SEQ ID NO: 12, b) amino acid residues 1279-1301 of SEQ ID NO: 12, c) amino acid residues 1219-1429 of SEQ ID NO: 12, or d) amino acid residues 1302-1429 of SEQ ID NO: 12. These fragments are distinct species because their structures and modes of action are different which, in turn, address different therapeutic endpoints.

B. If Group XXX is elected, applicant is required to elect an antibody that binds to a specific polypeptide selected from the group consisting of a) SEQ ID NO:10, b) SEQ ID NO: 12, or c) SEQ ID NO: 18. These sequences are distinct species because their structures and modes of action are different which, in turn, address different therapeutic endpoints.

Applicant is required under 35 U.S.C 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

5. Applicant is advised that a response to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. M.P.E.P. § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

6. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maher Haddad, whose telephone number is (703) 306-3472. The examiner can normally be reached Monday to Friday from 8:00 to 4:30. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached at (703) 308-3973. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission. Papers should be faxed to Technology Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center telephone number is (703) 305-3014.

Maher Haddad, Ph.D.
Patent Examiner
Technology Center 1600
July 3, 2002

Christina Chan

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SUPERVISORY PATENT EXAMINER
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